Table F-12. Summary of Technology-Based Effluent Limitations – EFF-001

Parameter	Units	Effluent Limitation			
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Maximum
Oil and Grease	mg/L	25	40	75	--
	lbs/day[1]	6,200	10,000	19,000	--
Settleable Solids	ml/L	1.0	1.5	--	3.0
Turbidity	NTU	75	100	--	230
pH[3]	standard units	6.0 – 9.0 at all times			

[1] The mass-based (lbs/day) effluent limitations in this table are based on the average dry weather flow design capacity of 29.6 MGD for the treatment facility and are therefore only good up to this flow. For flows above 29.6 MGD, mass-based effluent limitations shall be calculated individually using the concentration-based effluent limitations and the observed flow at the time of sampling per the following equation:

lbs/day = 0.00834 x Ce x Q
where:
Ce = the effluent concentration limit in µg/L
Q = observed flow rate in MGD

[2] Excursions from the effluent limit range are permitted subject to the following limitations (40 C.F.R. 401.17):

a. The total time during which the pH values are outside the required range of pH values shall not exceed 7 hours and 26 minutes in any calendar month; and
b. No individual excursion from the range of pH values shall exceed 60 minutes.
Note: 40 C.F.R. section 401.17(2)(c) notes that, for the purposes of 40 C.F.R. section 401.17, "excursion" is defined as "an unintentional and temporary incident in which the pH value of discharge wastewater exceeds the range set forth in the applicable effluent limitations guidelines." The State Board may adjust the requirements set forth in paragraph 40 C.F.R. section 401.17 (a) with respect to the length of individual excursions from the range of pH values, if a different period of time is appropriate based upon the treatment system, plant configuration, or other technical factors.

Table F-13. Summary of Technology-Based Effluent Limitations – EFF-001A

Parameter	Units	Effluent Limitation			
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Maximum
$CBOD_5$[1]	mg/L	25	40	85	--
	lbs/day[2]	6,200	10,000	21,000	--
	% removal	not less than 85[2]	--	--	--
TSS[1]	mg/L	30	45	90	--
	lbs/day[2]	7,400	11,000	22,000	--
	% removal	not less than 85[2]	--	--	--
pH[3]	standard units	6.0 – 9.0 at all times			

[1] 30-day average percent removal shall not be less than 85%.

[2] The mass-based (lbs/day) effluent limitations in this table are based on the average dry weather flow design capacity of 29.6 MGD for the treatment facility and are therefore only good up to this flow. For flows above 29.6 MGD, mass-based effluent limitations shall be calculated individually using the concentration-based effluent limitations and the observed flow at the time of sampling per the following equation:

lbs/day = 0.00834 x Ce x Q

where:
Ce = the effluent concentration limit in µg/L
Q = observed flow rate in MGD

[3] Excursions from the effluent limit range are permitted subject to the following limitations (40 C.F.R. 401.17):

a. The total time during which the pH values are outside the required range of pH values shall not exceed 7 hours and 26 minutes in any calendar month; and
b. No individual excursion from the range of pH values shall exceed 60 minutes.
Note: 40 C.F.R. section 401.17(2)(c) notes that, for the purposes of 40 C.F.R. section 401.17, "excursion" is defined as "an unintentional and temporary incident in which the pH value of discharge wastewater exceeds the range set forth in the applicable effluent limitations guidelines." The State Board may adjust the requirements set forth in paragraph 40 C.F.R. section 401.17 (a) with respect to the length of individual excursions from the range of pH values, if a different period of time is appropriate based upon the treatment system, plant configuration, or other technical factors.

C. Water Quality-Based Effluent Limitations (WQBELs)

1. Scope and Authority

CWA Section 301(b) and 40 C.F.R. section 122.44(d) require that permits include limitations more stringent than applicable federal technology-based requirements where necessary to achieve applicable water quality standards.

Section 122.44(d)(1)(i) of 40 C.F.R. requires that permits include effluent limitations for all pollutants that are or may be discharged at levels that have the reasonable potential to cause or contribute to an exceedance of a water quality standard, including numeric and narrative objectives within a standard. Where reasonable potential has been established for a pollutant, but there is no numeric criterion or objective for the pollutant, WQBELs must be established using: (1) U.S. EPA criteria guidance under CWA section 304(a), supplemented where necessary by other relevant information; (2) an indicator parameter for the pollutant of concern; or (3) a calculated numeric water quality criterion, such as a proposed state criterion or policy interpreting the state's narrative criterion, supplemented with other relevant information, as provided in section 122.44(d)(1)(vi).

The process for determining reasonable potential and calculating WQBELs when necessary is intended to protect the designated uses of the receiving water as specified in the Basin Plan and achieve applicable water quality objectives and criteria that are contained in other state plans and policies or any applicable water quality criteria contained in the Ocean Plan.

2. Applicable Beneficial Uses and Water Quality Criteria and Objectives

Beneficial uses for ocean waters of the Central Coast Region are established by the Basin Plan and California Ocean Plan and are described in section III.C.1 and III.C.3, respectively, of the Fact Sheet. The water quality objectives (WQOs) from the California Ocean Plan are incorporated as receiving water limitations in this Order.

Water quality objectives applicable to ocean waters of the Central Coast region include water quality objectives for bacterial characteristics, physical characteristics, chemical characteristics, biological characteristics, and radioactivity. In addition, Table 1 of the California Ocean Plan contains numeric water quality objectives for 83 toxic pollutants for the protection of marine aquatic life and human health. Pursuant to NPDES regulations at 40 C.F.R. section 122.44(d)(1) and in accordance with procedures established by the California Ocean Plan, the Central Coast Water Board has performed a reasonable potential analysis (RPA) to determine the need for effluent limitations for the Table 1 toxic pollutants.

3. Determining the Need for WQBELs

Procedures for performing an RPA for ocean dischargers are described in Section III.C and Appendix VI of the California Ocean Plan. The procedure is a statistical method that projects an effluent data set while taking into account the averaging period of WQOs, the long-term variability of pollutants in the effluent, limitations associated with sparse data sets, and uncertainty associated with censored data sets. The procedure assumes a lognormal distribution of the effluent data set and compares the 95th percentile concentration at 95th percent confidence of each Table 1 pollutant, accounting for dilution, to the applicable water quality criterion. The RPA results in one of three following endpoints.

Endpoint 1 - There is "reasonable potential." An effluent limitation must be developed for the pollutant. Effluent monitoring for the pollutant, consistent with the monitoring frequency in Appendix III (Ocean Plan), is required.

Endpoint 2 - There is no "reasonable potential." An effluent limitation is not required for the pollutant. Appendix III (Ocean Plan) effluent monitoring is not required for the pollutant; the Central Coast Board, however, may require occasional monitoring for the pollutant or for whole effluent toxicity as appropriate.

Endpoint 3 - The RPA is inconclusive. Monitoring for the pollutant or whole effluent toxicity testing, consistent with the monitoring frequency in Appendix III, is required. An existing effluent limitation for the pollutant shall remain in the permit, otherwise the permit shall include a reopener clause to allow for subsequent modification of the permit to include an effluent limitation if monitoring establishes that the discharge causes, has the reasonable potential to cause, or contribute to an excursion above a Table 1 water quality objective.

The State Water Board has developed a reasonable potential calculator, which is available at:

http://www.waterboards.ca.gov/water_issues/programs/ocean/docs/trirev/stakeholder050505/rpcalc22_setup.zip

The calculator (RPcalc 2.2) was used in the development of this Order and considers several pathways in the determination of reasonable potential.

i. First Path

If available information about the receiving water or the discharge supports a finding of reasonable potential without analysis of effluent data, the Central Coast Water Board may decide that WQBELs are necessary after a review of such information. Such information may include: the facility or discharge type, solids loading, lack of dilution, history of compliance problems, potential toxic effects, fish tissue data, 303(d) status of the receiving water, the presence of threatened or endangered species or their critical habitat, or other information.

ii. Second Path

If any pollutant concentration, adjusted to account for dilution, is greater than the most stringent applicable WQO, there is reasonable potential for that pollutant.

iii. Third Path

If the effluent data contains three or more detected and quantified values (i.e., values that are at or above the minimum level (ML), and all values in the data set are at or above the ML, a parametric RPA is conducted to project the range of possible effluent values. The 95th percentile concentration is determined at 95 percent confidence for each pollutant and compared to the most stringent applicable water quality objective to determine reasonable potential. A parametric analysis assumes that the range of possible effluent values is distributed log-normally. If the 95th percentile value is greater than the most stringent applicable water quality objective, there is reasonable potential for that pollutant.

iv. Fourth Path

If the effluent data contains three or more detected and quantified values (i.e., values that are at or above the ML), but at least one value in the data set is less than the ML, a parametric RPA is conducted according to the following steps:

i. If the number of censored values (those expressed as a "less than" value) account for less than 80 percent of the total number of effluent values, calculate the ML (the mean of the natural log of transformed data) and SL (the standard deviation of the natural log of transformed data) and conduct a parametric RPA, as described above for the Third Path.

ii. If the total number of censored values account for 80 percent of the total number of effluent values, conduct a non-parametric RPA, as described below for the Fifth Path. (A non-parametric analysis becomes necessary when the effluent data is limited, and no assumptions can be made regarding its possible distribution).

v. Fifth Path

A non-parametric RPA is conducted when the effluent data set contains less than three detected and quantified values, or when the effluent data set contains three or more detected and quantified values but the number of censored values accounts for 80 percent or more of the total of effluent values. A non-parametric analysis is conducted by ordering the data, comparing each result to the applicable WQO, and accounting for ties. The sample number is reduced by one for each tie, when the dilution-adjusted method detection limit (MDL) is greater than the water quality objective. If the adjusted sample number, after accounting for ties, is greater than 15, the pollutant has no reasonable potential to exceed the WQO. If the sample number is 15 or less, the RPA is inconclusive, monitoring is required, and any existing effluent limits in the expiring permit are retained.

An RPA was conducted using effluent monitoring data reported for June 2014 through December 2017. The implementation provisions for Table 1 in Section III.C of the Ocean Plan specify that the minimum initial dilution is the lowest average initial dilution within any single month of the year. Dilution estimates shall be based on observed waste flow characteristics, observed receiving water density structure, and the assumption that no currents of sufficient strength to influence the initial dilution process flow across the discharge structure. Order No. R3-2014-0013 established the minimum initial dilution factor (Dm) for the discharge to be 145 to 1 (seawater to effluent). The addition of the AWPF will result in varying conditions of discharge quality that will affect dilution characteristics. The amount of secondary effluent commingled with the RO concentrate and hauled saline waste will influence the buoyancy of the plume and the boundary interactions with the ambient receiving water.

As described in section II.A of this Fact Sheet, the Discharger conducted modeling to simulate worst case dilution under various blend scenarios of RO concentrate, hauled saline waste, and secondary effluent. From modeling results four Dms were selected to represent different blend amounts (Table F-3). By assigning multiple Dm values, the commingled effluent is characterized into four types of effluent waste streams that will be permitted for discharge. Representative conditions are therefore applied to each type of effluent waste stream to adequately assess the impacts of these discharges to Monterey Bay. The most conservative Dm of 145 was used to determine reasonable potential. This Dm reflects conditions of high secondary effluent, which accurately describes the discharge during the term of the existing permit.

A summary of the RPA results is provided below. As shown in the table, due to insufficient data, the RPA frequently leads to Endpoint 3 meaning that the RPA was inconclusive. In these circumstances, the Ocean Plan requires that existing effluent limitations for those pollutants (for which the RPA is inconclusive) remain in the reissued permit. When the RPA leads to Endpoint 2, meaning there is no reasonable potential for that pollutant, the limit has been removed for this permit term.

When using all available data for the past permit term, the RPA displayed "reasonable potential," indicated by a result of Endpoint 1, for ammonia, cyanide, acute toxicity, and chronic toxicity. RPA results that did not result in Endpoint 3 are bolded in the following.

Table F-14. RPA Results for Discharges to the Pacific Ocean

Parameter	Most Stringent WQO (µg/L)	N[1]	Number of Non-Detects	Max Effluent Conc. (µg/L)[2], [3]	RPA Result/Comment[4]
Objectives for Protection of Marine Aquatic Life					
Arsenic, Total Recoverable	8	7	0	3.7[6]	**Endpoint 2 – Effluent limitation not required.**
Cadmium, Total Recoverable	1	7	6	0.086[6]	Endpoint 3 – RPA is inconclusive.
Chromium (VI), Total	2	15	10	11	**Endpoint 2 – Effluent limitation not required.**
Copper, Total Recoverable	3	7	0	12[6]	**Endpoint 2 – Effluent limitation not required.**
Lead, Total Recoverable	2	7	4	0.35[6]	Endpoint 3 – RPA is inconclusive.
Mercury, Total Recoverable	0.04	7	5	0.069[6]	Endpoint 3 – RPA is inconclusive.
Nickel, Total Recoverable	5	7	1	7.6[6]	**Endpoint 2 – Effluent limitation not required.**
Selenium, Total Recoverable	15	15	2	44	**Endpoint 2 – Effluent limitation not required.**
Silver, Total Recoverable	0.7	7	6	0.14[6]	Endpoint 3 – RPA is inconclusive.
Zinc, Total Recoverable	20	7	1	170	**Endpoint 2 – Effluent limitation not required.**
Cyanide, Total	1	15	1	81	**Endpoint 1 – Effluent limitation is necessary.**
Total Chlorine, Residual	2	3	3	<0.2	Endpoint 3 – RPA is inconclusive.

Parameter	Most Stringent WQO (µg/L)	N[1]	Number of Non-Detects	Max Effluent Conc. (µg/L)[2], [3]	RPA Result/Comment[4]
Ammonia (as N)	600	59	0	47,900	**Endpoint 1 – Effluent limitation is necessary.**
Acute Toxicity	0.3	7	4	0.4	**Endpoint 1 – Effluent limitation is necessary.[5]**
Chronic Toxicity	1	16	0	625	**Endpoint 1 – Effluent limitation is necessary.**
Non-Chlorinated Phenolic Compounds	30	7	0	11	**Endpoint 2 – Effluent limitation not required.**
Chlorinated Phenolic Compounds	1	7	6	2.7[6]	Endpoint 3 – RPA is inconclusive.
Endosulfan	0.009	7	7	<0.00046	Endpoint 3 – RPA is inconclusive.
Endrin	0.002	7	7	<0.00018	Endpoint 3 – RPA is inconclusive.
HCH	0.004	7	4	0.036	Endpoint 3 – RPA is inconclusive.
Radioactivity	--	--	--	--	--
Objectives for Protection of Human Health – Non-Carcinogens					
Acrolein	220	7	7	<2.5	Endpoint 3 – RPA is inconclusive.
Antimony	1,200	6	3	0.98	Endpoint 3 – RPA is inconclusive.
Bis(2-chloroethoxy) Methane	4.4	7	7	0.29	Endpoint 3 – RPA is inconclusive.
Bis(2-chloroisopropyl) Ether	1,200	7	7	<0.27	Endpoint 3 – RPA is inconclusive.
Chlorobenzene	570	7	7	<0.05	Endpoint 3 – RPA is inconclusive.
Chromium (III)	190,000	6	0	10	**Endpoint 2 – Effluent limitation not required.**
Di-n-butyl Phthalate	3,500	7	7	<0.29	Endpoint 3 – RPA is inconclusive.
Dichlorobenzenes	5,100	7	6	0.074[6]	Endpoint 3 – RPA is inconclusive.
Diethyl Phthalate	33,000	7	7	<0.14	Endpoint 3 – RPA is inconclusive.
Dimethyl Phthalate	820,000	7	7	<0.17	Endpoint 3 – RPA is inconclusive.
4,6-dinitro-2-methylphenol	220	12	10	30[6]	Endpoint 3 – RPA is inconclusive.
2,4-dinitrophenol	4	7	7	<0.87	Endpoint 3 – RPA is inconclusive.
Ethylbenzene	4,100	7	7	<0.05	Endpoint 3 – RPA is inconclusive.
Fluoranthene	15	7	6	0.0032[6]	Endpoint 3 – RPA is inconclusive.
Hexachlorocyclopentadiene	58	7	7	<1.1	Endpoint 3 – RPA is inconclusive.
Nitrobenzene	4.9	7	7	<0.31	Endpoint 3 – RPA is inconclusive.

Parameter	Most Stringent WQO (µg/L)	N[1]	Number of Non-Detects	Max Effluent Conc. (µg/L)[2], [3]	RPA Result/Comment[4]
Thallium	2	7	7	<0.04	Endpoint 3 – RPA is inconclusive.
Toluene	85,000	7	1	0.47[6]	Endpoint 3 – RPA is inconclusive.
Tributyltin	0.0014	6	6	<0.014	Endpoint 3 – RPA is inconclusive.
1,1,1-trichloroethane	540,000	7	7	<0.05	Endpoint 3 – RPA is inconclusive.
Objectives for Protection of Human Health – Carcinogens					
Acrylonitrile	0.1	7	7	<1	Endpoint 3 – RPA is inconclusive.
Aldrin	0.000022	7	7	<0.00028	Endpoint 3 – RPA is inconclusive.
Benzene	5.9	7	7	<0.051	Endpoint 3 – RPA is inconclusive.
Benzidine	0.000069	7	7	<0.28	Endpoint 3 – RPA is inconclusive.
Beryllium	0.033	7	7	<0.07	Endpoint 3 – RPA is inconclusive.
Bis(2-chloroethyl) Ether	0.045	7	7	<0.23	Endpoint 3 – RPA is inconclusive.
Bis(2-ethlyhexyl) Phthalate	3.5	7	5	1.1	Endpoint 3 – RPA is inconclusive.
Carbon Tetrachloride	0.9	7	7	<0.069	Endpoint 3 – RPA is inconclusive.
Chlordane	0.000023	6	6	<0.002	Endpoint 3 – RPA is inconclusive.
Chlorodibromomethane	8.6	7	6	0.28[6]	Endpoint 3 – RPA is inconclusive.
Chloroform	130	7	1	0.78	Endpoint 3
DDT	0.00017	7	7	<0.00018	Endpoint 3 – RPA is inconclusive.
1,4-dichlorobenzene	18	7	7	<0.072	Endpoint 3 – RPA is inconclusive.
3,3'-dichlorobenzidine	0.0081	7	7	<0.13	Endpoint 3 – RPA is inconclusive.
1,2-dichloroethane	28	7	7	<0.09	Endpoint 3 – RPA is inconclusive.
1,1-dichloroethylene	0.9	7	7	<0.086	Endpoint 3 – RPA is inconclusive.
Dichlorobromomethane	6.2	7	7	<0.2	Endpoint 3 – RPA is inconclusive.
Dichloromethane (Methylene Chloride)	450	6	3	0.22	Endpoint 3 – RPA is inconclusive.7
1,3-dichloropropene	8.9	7	7	<0.09	Endpoint 3 – RPA is inconclusive.
Dieldrin	0.00004	7	7	<0.0001	Endpoint 3 – RPA is inconclusive.
2,4-dinitrotoluene	2.6	7	7	<0.16	Endpoint 3 – RPA is inconclusive.

Parameter	Most Stringent WQO (µg/L)	N[1]	Number of Non-Detects	Max Effluent Conc. (µg/L)[2], [3]	RPA Result/Comment[4]
1,2-diphenylhydrazine	0.16	7	7	<0.15	Endpoint 3 – RPA is inconclusive.
Halomethanes	130	7	4	0.38[6]	Endpoint 3 – RPA is inconclusive.
Heptachlor	0.00005	7	7	<0.0004	Endpoint 3 – RPA is inconclusive.
Heptachlor Epoxide	0.00002	7	7	<0.00025	Endpoint 3 – RPA is inconclusive.
Hexachlorobenzene	0.00021	7	7	<0.17	Endpoint 3 – RPA is inconclusive.
Hexachlorobutadiene	14	7	7	<0.085	Endpoint 3 – RPA is inconclusive.
Hexachloroethane	2.5	7	7	<0.06	Endpoint 3 – RPA is inconclusive.
Isophorone	730	7	7	<0.31	Endpoint 3 – RPA is inconclusive.
N-nitrosodimethylamine	7.3	7	7	<0.71	Endpoint 3 – RPA is inconclusive.
N-nitrosodi-N-propylamine	0.38	7	7	<0.33	Endpoint 3 – RPA is inconclusive.
N-nitrosodiphenylamine	2.5	7	7	<0.17	Endpoint 3 – RPA is inconclusive.
PAHs	0.0088	7	2	0.2	**Endpoint 2 – Effluent limitation not required.**
PCBs	0.000019	7	7	<0.0015	Endpoint 3 – RPA is inconclusive.
TCDD equivalents	3.9E-09	7	0	2.9E-08[6]	Endpoint 3 – RPA is inconclusive.
1,1,2,2-tetrachloroethane	2.3	7	7	<0.11	Endpoint 3 – RPA is inconclusive.
Tetrachloroethylene (Tetrachloroethene)	2	7	7	<0.082	Endpoint 3 – RPA is inconclusive.
Toxaphene	0.00021	7	7	<0.002	Endpoint 3 – RPA is inconclusive.
Trichloroethylene	27	7	7	<0.06	Endpoint 3 – RPA is inconclusive.
1,1,2-trichloroethane	9.4	7	7	<0.08	Endpoint 3 – RPA is inconclusive.
2,4,6-trichlorophenol	0.29	7	7	<0.23	Endpoint 3 – RPA is inconclusive.
Vinyl Chloride	36	7	6	0.19[6]	Endpoint 3 – RPA is inconclusive.

NR indicates that effluent data were not reported.

[1] Number of data points available for the RPA.

[2] If there is a detected value, the highest reported value is summarized in the table. If there are no detected values, the lowest MDL is summarized in the table.

[3] Note that the reported MEC does not account for dilution. The RPA does account for dilution; therefore, it is possible for a parameter with an MEC in exceedance of the most stringent criteria not to present a RP (i.e., Endpoint 1).

[4] Endpoint 1 – RP determined, limit required, monitoring required.
Endpoint 2 – Discharger determined not to have RP, monitoring may be established.
Endpoint 3 – RPA was inconclusive, carry over previous limits if applicable, establish monitoring.

[5] Endpoint 1 has been determined on the basis of Step 13 (BPJ) of the Ocean Plan RPA procedure.

[6] Estimated concentration. The result was detected at a concentration higher than the MDL and lower than the ML.

4. WQBEL Calculations

Using the results of the RPA, the Central Coast Water Board is establishing WQBELs for ammonia, cyanide, acute toxicity, and chronic toxicity based on a conclusion of Endpoint 1. An Endpoint 2 was concluded for chromium VI, selenium, non-chlorinated phenols, and PAHs, which have limitations in Order R3-2014-0013. Endpoint 2 resulted for arsenic, chromium III, copper, nickel, and zinc, which do not have limitations in Order R3-2014-0013. No new limitations are established for these pollutants. All other California Ocean Plan Table 1 pollutants resulted in an Endpoint 3 and the limits for these pollutants are retained in this Order, with the exception of DDT and mercury, which did not have limitations in the previous permit.

As described by Section III. C of the California Ocean Plan, effluent limitations for Table 1 pollutants are calculated according to the following equation.

$$Ce = Co + Dm (Co – Cs)$$

Where

Ce = the effluent limitation (µg/L)

Co = the concentration (the water quality objective) to be met at the completion of initial dilution (µg/L).

Cs= background seawater concentration (µg/L)

Dm = minimum probable initial dilution expressed as parts seawater per part wastewater (here Dm = 145, 259, 388, or 473)

Initial dilution is the process that results in the rapid and irreversible turbulent mixing of wastewater with ocean water around the point of discharge. As described in section II.A.5 of this Fact Sheet, the Facility has four Dms to represent multiple RO concentrate, hauled saline waste, and effluent blend scenarios. In order to facilitate reporting of the six-month median results, effluent limitations in this Order are set equal to the Ocean Plan objectives and the Facility is allowed to use the appropriate Dm to calculate the concentrations that would result after dilution (C_{ZID}). Compliance is then determined by comparing the calculated concentration after dilution (C_{ZID}) to the Ocean Plan objective. In this way, C_{ZID}, the value reported for compliance determination, is substituted for Co and the Ocean Plan equation above is re-arranged as follows:

$$C_{ZID} = (Ce + DmCs)/(1+Dm)$$

As site-specific water quality data are not available, in accordance with Table 1 implementing procedures, Cs equals zero for all pollutants, except the following.

Table F-15. Background Concentrations (Cs) – California Ocean Plan (Table 3)

Pollutant	Background Seawater Concentration
Arsenic	3 µg/L
Copper	2 µg/L
Mercury	0.0005 µg/L
Silver	0.16 µg/L
Zinc	8 µg/L

Applicable water quality objectives from Table 1 of the California Ocean Plan are as follows:

Table F-16. Water Quality Objectives (Co) – California Ocean Plan (Table 1) Objectives for Protection Aquatic Life

Pollutant	Units	6-Month Median	Daily Maximum	Instantaneous Maximum
Arsenic	µg/L	8	32	80
Cadmium	µg/L	1	4	10
Chromium (VI)	µg/L	2	8	20
Copper	µg/L	3	12	30
Lead	µg/L	2	8	20
Mercury	µg/L	0.04	0.16	0.4
Nickel	µg/L	5	20	50
Selenium	µg/L	15	60	150
Silver	µg/L	0.7	2.8	7
Zinc	µg/L	20	80	200
Cyanide	µg/L	1	4	10
Total Chlorine Residual	µg/L	2	8	60
Ammonia	µg/L	600	2,400	6,000
Acute Toxicity	TUa	--	0.3	--
Chronic Toxicity	TUc	--	1	--
Non-Chlorinated Phenolic Compounds	µg/L	30	120	300
Chlorinated Phenolics	µg/L	1	4	10
Endosulfan	µg/L	0.009	0.018	0.027
Endrin	µg/L	0.002	0.004	0.006
HCH	µg/L	0.004	0.008	0.012
Radioactivity	µg/L	--	--	--

Table F-17. Quality Objectives (Co) – California Ocean Plan (Table 1) Objectives for Human Health

Pollutant	Units	6-Month Median
Noncarcinogens		
Acrolein	µg/L	220
Antimony	µg/L	1,200
Bis(2-Chloroethoxy)Methane	µg/L	4.4
Bis(2-Chloroisopropyl)Ether	µg/L	1,200
Chlorobenzene	µg/L	570
Chromium (III)	µg/L	190,000
Di-n-Butyl Phthalate	µg/L	3,500
Dichlorobenzenes	µg/L	5,100
Diethyl Phthalate	µg/L	33,000

Pollutant	Units	6-Month Median
Dimethyl Phthalate	µg/L	820,000
2-Methyl-4,6-Dinitrophenol	µg/L	220
2,4-Dinitrophenol	µg/L	4
Ethylbenzene	µg/L	4,100
Fluoranthene	µg/L	15
Hexachlorocyclopentadiene	µg/L	58
Nitrobenzene	µg/L	4.9
Thallium	µg/L	2
Toluene	µg/L	85,000
Tributyltin	µg/L	0.0014
1,1,1-Trichloroethane	µg/L	540,000
Carcinogens		
Acrylonitrile	µg/L	0.1
Aldrin	µg/L	0.000022
Benzene	µg/L	5.9
Benzidine	µg/L	0.000069
Beryllium	µg/L	0.033
Bis(2-Chloroethyl)Ether	µg/L	0.045
Bis(2-Ethylhexyl)Phthalate	µg/L	3.5
Carbon Tetrachloride	µg/L	0.9
Chlordane	µg/L	0.000023
Chlorodibromomethane	µg/L	8.6
Chloroform	µg/L	130
DDT (total)	µg/L	0.00017
1,4 Dichlorobenzene	µg/L	18
3,3'-Dichlorobenzidine	µg/L	0.0081
1,2-Dichloroethane	µg/L	28
1,1-Dichloroethylene	µg/L	0.9
Dichlorobromomethane	µg/L	6.2
Methylene Chloride	µg/L	450
1,3-Dichloropropylene	µg/L	8.9
Dieldrin	µg/L	0.00004
2,4-Dinitrotoluene	µg/L	2.6
1,2-Diphenylhydrazine	µg/L	0.16
Halomethanes	µg/L	130
Heptachlor	µg/L	0.00005
Heptachlor Epoxide	µg/L	0.00002
Hexachlorobenzene	µg/L	0.00021
Hexachlorobutadiene	µg/L	14
Hexachloroethane	µg/L	2.5
Isophorone	µg/L	730
N-Nitrosodimethylamine	µg/L	7.3
N-Nitrosodi-n-Propylamine	µg/L	0.038
N-Nitrosodiphenylamine	µg/L	2.5

Pollutant	Units	6-Month Median
PAHs (total)	µg/L	0.0088
PCBs	µg/L	0.000019
TCDD Equivalents	µg/L	0.0000000039
1,1,2,2-Tetrachloroethane	µg/L	2.3
Tetrachloroethylene	µg/L	2
Toxaphene	µg/L	0.00021
Trichloroethylene	µg/L	27
1,1,2-Trichloroethane	µg/L	9.4
2,4,6-Trichlorophenol	µg/L	0.29
Vinyl Chloride	µg/L	36

With the exception of acute and chronic toxicity, the Ocean Plan objectives in Tables F-15, F-16, and F-17 are applied as effluent limitations to be met after applying appropriate Concentrate Waste Dilution Ratios as described in Special Provision VI.C.6.b of the Order and section IV.C of the MRP. Acute and chronic toxicity limitations are retained from Order R3-2014-0013.

5. Bacteria

This Order includes new effluent limitations for total and fecal coliform and enterococcus bacteria that apply if the Executive Officer concludes from a bacterial assessment (described in Receiving Water Limitation A.1) that the discharge consistently exceeds the geometric mean bacteria Receiving Water Limitation in A.1. The effluent limitations are based on the Ocean Plan objectives but compliance is determined using the applicable Dm.

6. Whole Effluent Toxicity (WET)

Whole effluent toxicity (WET) limitations protect receiving water quality from the aggregate toxic effect of a mixture of pollutants in the effluent. WET tests measure the degree of response of exposed aquatic test organisms to an effluent. The WET approach allows for protection of the narrative “no toxics in toxic amounts” criterion while implementing numeric criteria for toxicity. There are two types of WET tests - acute and chronic. An acute toxicity test is conducted over a short time period and measures mortality. A chronic toxicity test is conducted over a longer period of time and may measure mortality, reproduction, and growth.

The Basin Plan requires that all waters shall be maintained free of toxic substances in concentrations which are toxic to, or which produce detrimental physiological responses in, human, plant, animal, or aquatic life. Survival of aquatic organisms in surface waters subjected to a waste discharge or other controllable water quality conditions shall not be less than that for the same water body in areas unaffected by the waste discharge or for another control water.

a. Effluent acute toxicity collected from August 2014 through December 2017 exhibited a maximum value of 0.4 TUa. Using the Ocean Plan Equation 2 and the most conservative proposed dilution factor of 145, the discharge does not exceed the Ocean Plan objective. However, the California Ocean Plan requires consideration of all available information, including the "potential toxic impact of the discharge" to determine if WQBELs are necessary, notwithstanding the statistical procedure with which the RPA is conducted for most pollutants. Due to the multiple residential, commercial, and industrial contributors to the influent flow of the Facility, and

because the cumulative effects of various pollutants present at low levels in the discharge are unknown, acute toxicity limitations and monitoring requirements are retained from the previous permit. The acute toxicity limitation is also retained to be protective of potential toxicity that may result from future brine/secondary effluent blends. The Regional Water Board believes the acute TST test is protective of beneficial uses in the Ocean Plan. By incorporating the acute toxicity limit using the TST approach, acute toxicity monitoring and reporting is simplified, as the test only has to be run at one concentration and the control, as opposed to multiple dilutions required to measure the LC50. In light of multiple Dm conditions, the simplified tests may reduce the potential for error associated with dilutions used in tests.

To determine an effluent limitation for acute toxicity, the Ocean Plan allows a mixing zone that is ten percent of the distance from the edge of the outfall structure to the edge of the chronic mixing zone (the zone of initial dilution); and therefore, the effluent limitation for acute toxicity is determined by the following equation:

$$Ce = Co + (0.1)\ Dm\ (Co)$$

b. Chronic toxicity data collected from August 2014 through December 2017 exhibited a maximum value of 625 TUc. Using this effluent data, RPCalc software, and the most conservative proposed dilution factor of 145, the discharge exhibits reasonable potential to exceed the Ocean Plan objective for chronic toxicity. Therefore, this Order includes an effluent limitation and monitoring requirements for chronic toxicity.

c. The Ocean Plan's approach to acute and chronic toxicity WQBELs is based on a "toxic unit" derived from one multi-concentration toxicity test. In 2010, U.S. EPA endorsed the TST statistical approach in *National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document* (EPA 833-R-10-003, 2010) used in this NPDES permit. Compliance with these toxicity effluent limitations (i.e., determination of "pass" or "fail") shall be evaluated using the Test of Significant Toxicity (TST) statistical approach at the discharge "in-stream" waste concentration (IWC), as described in section VII.F of this Order and section V of the MRP (Attachment E). The TST statistical approach is described in the *National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document* (EPA 833-R-10-003, 2010), Appendix A, Figure A-1 and Table A-1. The TST null hypothesis shall be "mean discharge IWC response ≤ 0.75 × mean control response." A test that rejects this null hypothesis shall be reported as "pass." A test that does not reject this null hypothesis shall be reported as "fail." Discharger shall also report the "Percent Effect" as part of chronic toxicity result.

Section III.F of the 2015 Ocean Plan provides for more stringent requirements if necessary to protect the designated beneficial uses of ocean waters. Diamond et al. (2013) examined the side-by-side comparison of No-Observed-Effect-Concentration (NOEC) and TST results using California chronic toxicity test data (including data from POTWs) for the West Coast marine methods and test species required under this Order. See Table 1 (method types 1 through 5) on page 1103 in Diamond D, Denton D, Roberts, J, Zheng L. 2013. *Evaluation of the Test of Significant Toxicity for Determining the Toxicity of Effluents and Ambient Water Samples*. Environ Toxicol Chem 32:1101-1108. This comparison shows that while the TST and NOEC statistical approaches perform similarly most of the time, the TST performs better in identifying toxic and nontoxic samples, a desirable characteristic for chronic toxicity testing conducted under this Order. This examination also signals that the test methods' false positive rate (β no higher than 0.05 at a mean effect of 10%) and

false negative rate (α no higher than 0.05 (0.25 for topsmelt) at a mean effect of 25%) are indeed low. This highlights that using the TST in this Order - in conjunction with other Ocean Plan requirements (West Coast WET method/test species for monitoring and limiting chronic toxicity, the IWC representing the critical condition for water quality protection, the initial dilution procedure, and a single test for compliance)—provides increased assurance that statistical error rates are more directly addressed and accounted for in decisions regarding chronic toxicity in the discharge. As a result, and in accordance with Ocean Plan section III.F, the Central Coast Water Board is exercising its discretion to use the TST statistical approach for this discharge. U.S. EPA, Region 9 agrees with the Central Coast Water Board's determination.

Compliance with acute and chronic toxicity requirements contained in this Order shall be determined in accordance to section VII.G of this Order. Nevertheless, this Order contains a reopener to require the Central Coast Water Board and U.S. EPA, Region 9 to modify this Order, if necessary, to make it consistent with any new policy, law, or regulation.

In January 2010, U.S. EPA published a guidance document entitled; *EPA Regions 8, 9 and 10 Toxicity Training Tool*, which among other things discusses permit limitation expression for chronic toxicity. The document acknowledges that NPDES regulations at 40 C.F.R. section 122.45(d) require that all permit limits be expressed, unless impracticable, as an average weekly effluent limitation (AWEL) and average monthly effluent limitation (AMEL) for POTWs. Following section 5.2.3 of the Technical Support Document (TSD), the use of an AWEL and AMEL is not appropriate for WET. In lieu of an AWEL and AMEL for POTWs, U.S. EPA recommends establishing a maximum daily effluent limitation (MDEL) for toxic pollutants and pollutants in water quality permitting, including WET. This is appropriate for two reasons. The basis for the average weekly and average monthly requirement for POTWs derives from secondary treatment regulations and is not related to the requirement to assure achievement of water quality standard. Moreover, an average weekly and average monthly requirement comprising up to seven and thirty-one daily samples, respectively, could average out daily peak toxic concentrations for WET and therefore, the discharge's potential for causing acute and chronic effects would be missed. It is impracticable to use an AWEL and AMEL, because short-term spikes of toxicity levels that would be permissible under the 7-day and 31-day average scheme, respectively, would not be adequately protective of all beneficial uses. The MDEL is the highest allowable value for the discharge measured during a calendar day or 24-hour period representing a calendar day. This approach is comparable to that of the Ocean Plan, which calls for a daily maximum chronic toxicity limit.

Later in June 2010, U.S. EPA published another guidance document titled, *National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document* (EPA 833-R-10-003, June 2010), in which the following was recommended: "Permitting authorities should consider adding the TST approach to their implementation procedures for analyzing valid WET data for their current NPDES WET Program." The TST approach is another statistical option for analyzing valid WET test data. Use of the TST approach does not result in any changes to U.S. EPA's WET test methods. Section 9.4.1.2 of U.S. EPA's *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms* (EPA/821/R-02/013, 2002), recognizes that, "the statistical methods in this manual are not the only possible methods of statistical analysis." The TST

approach can be applied to acute (survival) and chronic (sublethal) endpoints and is appropriate to use for both freshwater and marine EPA WET test methods.

The U.S. EPA's WET testing program and acute and chronic WET methods rely on the measurement result for a specific test endpoint, not upon achievement of specified concentration-response patterns to determine toxicity. U.S. EPA's WET methods do not require achievement of specified effluent or ambient concentration response patterns prior to determining that toxicity is present.[1] Nevertheless, U.S. EPA's acute and chronic WET methods require that effluent and ambient concentration-response patterns generated for multi-concentration acute and chronic toxicity tests be reviewed—as a component of test review following statistical analysis—to ensure that the calculated measurement result for the toxicity test is interpreted appropriately. (EPA-821-R-02-012, section 12.2.6.2; EPA-821-R02-013, section 10.2.6.2). In 2000, EPA provided guidance for such reviews to ensure that test endpoints for determining toxicity based on the statistical approaches utilized at the time the guidance was written (no-observed-effect concentration (NOEC), percent waste giving 50 percent survival of test organisms (lethal concentration 50, LC50), effects concentration at 25 percent (EC25) were calculated appropriately (EPA 821-B-00-004).

U.S. EPA designed its 2000 guidance as a standardized step-by step review process that investigates the causes for ten commonly observed concentration-response patterns and provides for the proper interpretation of the test endpoints derived from these patterns for NOECs, LC50, and EC25, thereby reducing the number of misclassified test results. The guidance provides one of three determinations based on the review steps: that calculated effect concentrations are reliable and should be reported, that calculated effect concentrations are anomalous and should be explained, or that the test was inconclusive and should be repeated with a newly collected sample. The standardized review of the effluent and receiving water concentration-response patterns provided by U.S. EPA's 2000 guidance decreased discrepancies in data interpretation for NOEC, LC50, and EC25 test results, thereby lowering the chance that a truly nontoxic sample would be misclassified and reported as toxic.

Appropriate interpretation of the measurement result from U.S. EPA's TST statistical approach ("Pass"/"Fail") for effluent and receiving water samples is, by design, independent from the concentration-response patterns of the toxicity tests for those samples. Therefore, when using the TST statistical approach, application of U.S. EPA's 2000 guidance on effluent and receiving waters concentration-response patterns will not improve the appropriate interpretation of TST results as long as all Test Acceptability Criteria and other test review procedures—including those related to quality assurance for effluent and receiving water toxicity tests, reference toxicity tests, and control performance (mean, standard deviation, and coefficient of variation)—described by the WET test methods manual and TST guidance, are followed. The 2000 guidance may be used to identify reliable, anomalous, or inconclusive concentration-response patterns and associated statistical results to the extent that the guidance recommends review of test procedures and laboratory performance already recommended in the WET test methods manual. The guidance does not apply to single-concentration (IWC) and control statistical t-tests and does not apply to the statistical assumptions on which the TST is based. The Central

[1] See Supplementary Information in support of the Final Rule establishing WET test methods at 67 Fed. Reg. 69952, 69963, Nov. 19, 2002.

Coast Water Board and U.S. EPA, Region 9 will not consider a concentration-response pattern as sufficient basis to determine that a TST t- test result for a toxicity test is anything other than valid, absent other evidence. In a toxicity laboratory, unexpected concentration-response patterns should not occur with any regular frequency and consistent reports of anomalous or inconclusive concentration-response patterns or test results that are not valid will require an investigation of laboratory practices.

Any Data Quality Objectives or Standard Operating Procedure used by the toxicity testing laboratory to identify and report valid, invalid, anomalous, or inconclusive effluent or receiving water toxicity test measurement results from the TST statistical approach which include a consideration of concentration-response patterns and/or Percent Minimum Significant Differences (PMSDs) must be submitted for review by the Central Coast Water Board, in consultation with U.S. EPA, Region 9 and the State Water Board's Quality Assurance Officer and Environmental Laboratory Accreditation Program (ELAP) (40 C.F.R. section 122.44(h)). As described in the bioassay laboratory audit directives to the San Jose Creek Water Quality Laboratory from the State Water Board dated August 7, 2014, and from the U.S. EPA dated December 24, 2013, the PMSD criteria only apply to compliance for NOEC and the sublethal endpoints of the NOEC, and therefore are not used to interpret TST results.

E. Final Effluent Limitation Considerations

Final technology-based and water quality-based effluent limitations established by the Order are discussed in the preceding sections of the Fact Sheet.

1. Anti-Backsliding Requirements

The final effluent limitations in this Order/Permit are at least as stringent as the effluent limitations in the previous Order/Permit, Order No. R3-2014-0013, with a few exceptions. Section 402(o)1/303(d)(4) of the Clean Water Act (CWA) provides statutory exceptions to the general prohibition of backsliding contained in CWA section 402(o)(1)/303(d)(4). Based on new monitoring data, the California Ocean Plan's Appendix VI procedure resulted in a finding of endpoint 2 (i.e., "no reasonable potential") for chromium VI, selenium, non-chlorinated phenols, and PAHs. Consistent with the California Ocean Plan, effluent limitations are not required for pollutants resulting in an Endpoint 2. The removal of the effluent limitations for these constituents will therefore not authorize a change in the mass emission rates or a relaxation in the treatment of the discharge and meets the backsliding exception under CWA section 402(o)(1)/303(d)(4)(B).

This Order also allows less stringent, tiered, concentration-based effluent limitations under certain blends of brine waste and secondary effluent. The less stringent effluent limitations are the result of new dilution factors developed to account for operation of the AWPF. Because the brine waste is higher in salinity, it will affect the dilution characteristics of the blended effluent. Using EPA approved models, the Discharger estimated the dilution available under worst case conditions for the entire range of expected concentrate waste dilution scenarios. From the range of associated dilution factors, four Dms were selected to develop tiered concentration limits. The limitations in Order No. R3-2014-0013 are retained in this Order for the most restrictive Dm, which is characterized by high secondary effluent flow. For lower ratios of RO concentrate and saline waste to total effluent, higher dilution factors have been granted and therefore, higher effluent concentration limitations are allowed. Despite the higher concentration limitations, mass limitations from Order No. R3-2014-0013 remain the same under all

concentrate waste dilution ratios and dilution factors. Under CWA sections 403(o)(1)/303(d)(4)(B) for waters in attainment, the less stringent effluent tiered limitations for Ocean Plan Table 1 parameters is allowable because the action is consistent with the California antidegradation policy in Resolution No. 68-16, as described in section IV.D.2 of this Fact Sheet. In addition, CWA section 402(o)(2) allows backsliding where new information is available that was not available at the time of permit issuance and would have justified a less stringent effluent limitation. The addition of the AWPF and associated changes in recycled water and RO concentrate production, as well as the dilution factors based on new modeling constitute new information to further support an exception to anti-backsliding.

2. Antidegradation Policies

The final effluent limitations from the previous order have been retained in this Order/Permit, with the exception of selenium, non-chlorinated phenols, and chromium VI. This Order also allows less stringent concentration-based effluent limitations under certain blends of RO concentrate, saline waste, and secondary effluent. As described in section IV.D.1 above, the less stringent effluent limitations are the result of new dilution factors developed to account for operation of the AWPF and the addition of the concentrate to the discharge.

The most restrictive Dm in Order No. R3-2014-0013 is retained in this Order. Despite the higher Dms, mass limitations from Order R3-2014-0013 remain the same under all Concentrate Waste dilution ratios and dilution factors. As such, this Order does not allow an increase in mass discharged. The AWPF will treat new, additional agricultural and stormwater runoff source water which will allow the Discharger to provide irrigation water and purified water for injection into the Seaside Groundwater Basin for use as a municipal water supply. As the Blanco Drain and Reclamation Ditch source waters are impaired for some parameters, the diversion and treatment through the WWTP and AWPF will improve the quality of runoff entering the Salinas River and Monterey Bay.

Under CWA sections 403(o)(1)/303(d)(4)(B) for waters in attainment, removal of the final effluent limitations for these parameters is consistent with the State's antidegradation policy because the discharge is in compliance with existing water quality objectives for the Pacific Ocean. The Order's limitations and conditions ensure maintenance of the existing quality of receiving waters. Therefore, provisions of the Order are consistent with applicable antidegradation policy expressed by NPDES regulations at 40 C.F.R. section 131.12 and State Water Board Resolution 68-16.

3. Stringency of Requirements for Individual Pollutants

This Order contains both technology-based and water quality-based effluent limitations for individual pollutants. The technology-based effluent limitations consist of restrictions on $CBOD_5$, TSS, pH, oil and grease, settleable solids, and turbidity. Restrictions on these pollutants are discussed in section IV.B of this Fact Sheet. This Order's technology-based pollutant restrictions implement the minimum, applicable federal technology-based requirements.

Water quality-based effluent limitations have been derived to implement water quality objectives that protect beneficial uses. Both the beneficial uses and the water quality objectives have been approved pursuant to federal law and are the applicable federal water quality standards. The procedures for calculating the individual water quality-based effluent limitations are based on the Ocean Plan, which was approved by U.S. EPA on February 14, 2006 and has since been further amended. All beneficial uses and water quality objectives contained in the Basin Plan were approved under state law and

submitted to and approved by U.S. EPA prior to May 30, 2000. Any water quality objectives and beneficial uses submitted to U.S. EPA prior to May 30, 2000, but not approved by U.S. EPA before that date, are nonetheless "applicable water quality standards for purposes of the CWA" pursuant to 40 C.F.R. section 131.21(c)(1). Collectively, this Order's restrictions on individual pollutants are no more stringent than required to implement the requirements of the CWA.

Final, technology and water quality-based effluent limitations are summarized in sections IV.B and IV.C of this Fact Sheet

F. Interim Effluent Limitations – Not Applicable

G. Land Discharge Specifications – Not Applicable

H. Recycling Specifications

The Order allows the production of disinfected tertiary recycled wastewater in compliance with applicable State and local requirements regarding the production and use of recycled wastewater, including those requirements established by the Division of Drinking Water at title 22, sections 60301 - 60357 of the California Code of Regulations, Water Recycling Rationale for Receiving Water Limitations

I. Surface Water

Receiving water quality is a result of many factors, some unrelated to the discharge. This Order considers these factors and is designed to minimize the influence of the discharge on the receiving water. Receiving water limitations within this Order are retained from the previous Order.

J. Groundwater

Groundwater limitations established by the Order include general objectives for groundwater established by the Basin Plan for the Central Coast Region.

V. RATIONALE FOR PROVISIONS

A. Standard Provisions

Standard Provisions, which apply to all NPDES permits in accordance with 40 C.F.R. § 122.41, and additional conditions applicable to specified categories of permits in accordance with 40 C.F.R. § 122.42, are provided in Attachment D to the order.

Sections 122.41(a)(1) and (b) through (n) of 40 C.F.R. establish conditions that apply to all State-issued NPDES permits. These conditions must be incorporated into the permits either expressly or by reference. If incorporated by reference, a specific citation to the regulations must be included in the Order. Section 123.25(a)(12) allows the state to omit or modify conditions to impose more stringent requirements. In accordance with 40 C.F.R. § 123.25, this Order omits federal conditions that address enforcement authority specified in 40 C.F.R. §§ 122.41(j)(5) and (k)(2) because the enforcement authority under the Water Code is more stringent. In lieu of these conditions, this Order incorporates by reference Water Code section 13387(e).

B. Special Provisions

1. Reopener Provisions

This Order may be reopened and modified in accordance with NPDES regulations at 40 C.F.R. parts 122 and 124, as necessary, to include appropriate conditions or limits based on newly available information, or to implement any, new state water quality

objectives that are approved by U.S. EPA. As effluent is further characterized through additional monitoring, and if a need for additional effluent limitations becomes apparent after additional effluent characterization, the Order will be reopened to incorporate such limitations.

2. Special Studies, Technical Reports and Additional Monitoring Requirements

a. Toxicity Reduction Requirements

The requirements in section VI.C.2.a and b of the Order address requirements necessary to ensure compliance with Ocean Plan objectives for toxicity. The Ocean Plan section III.C.10 requires that if a discharge consistently exceeds an effluent limitation based on a toxicity objective, a TRE is required. The requirement to submit a TRE Workplan (section VI.C.2.a of this Order) is necessary to prevent delays in initiating the TRE, so that the Discharger can diagnose and remedy toxicity in the shortest time practicable. Accelerated monitoring included in the Order section VI.C.2.b is required in order to determine if an exceedance of a toxicity limitation is consistent versus sporadic and would provide information for the Central Coast Water Board to determine if a TRE is necessary. The toxicity reduction requirements in section VI.C.2.a-b are retained from the previous Order.

b. Water Contact (Bacterial Characteristics)

The requirement for repeat water-contact bacteriological monitoring is established in accordance with California Ocean Plan section III.D.1.b for exceedance of a single sample maximum bacteria standard contained within section IV.A.1 of this Order. This provision is retained from the previous permit.

c. Brine Waste Disposal Study

The limitations and conditions in this permit are based on the assumption of the RO concentrate, hauled saline waste, and secondary effluent as described in the ROWD. As such, the permit may not account for changes in composition or volume associated with additional brine wastes. Prior to discharging additional brine waste beyond what is described in this permit, the Discharger must provide information to the Central Coast Water Board that is necessary to determine if the permit adequately regulates the discharge or if additional requirements and/or permit modification is necessary.

d. Ocean Outfall and Diffuser Monitoring

Dye studies and outfall inspections are required to ensure a periodic assessment of the integrity of the outfall pipes.

3. Best Management Practices and Pollution Prevention

a. Pollutant Minimization Program

The 2015 California Ocean Plan establishes guidelines for the Pollutant Minimization Program (PMP). At the time of the proposed adoption of this Order no known evidence was available that would require the Discharger to immediately develop and conduct a PMP. The Central Coast Water Board will notify the Discharger in writing if such a program becomes necessary

4. Construction, Operation, and Maintenance Specifications

The Facility shall be operated as specified under Standard Provision D of Attachment D.

5. Special Provisions for Publicly Owned Treatment Works (POTWs)

a. Biosolids Management

Provisions regarding sludge handling and disposal ensure that such activity will comply with all applicable regulations.

Part 503 of 40 C.F.R. sets forth U.S. EPA's final rule for the use and disposal of biosolids, or sewage sludge, and governs the final use or disposal of biosolids. The intent of this federal program is to ensure that sewage sludge is used or disposed of in a way that protects both human health and the environment.

U.S. EPA's regulations require that producers of sewage sludge meet certain reporting, handling, and disposal requirements. As the U.S. EPA has not delegated the authority to implement the sludge program to the State of California, the enforcement of sludge requirements that apply to the Discharger remains under U.S. EPA's jurisdiction at this time. U.S. EPA, not the Central Coast Water Board, will oversee compliance with 40 C.F.R. part 503.

40 C.F.R. section 503.4 (Relationship to other regulations) states that the disposal of sewage sludge in a municipal solid waste landfill unit, as defined in 40 C.F.R. section 258.2, that complies with the requirements in 40 C.F.R. part 258 constitutes compliance with section 405 (d) of the CWA. Any person who prepares sewage sludge that is disposed in a municipal solid waste landfill unit must ensure that the sewage sludge meets the applicable requirements of 40 C.F.R. part 503.

b. Pretreatment

Pretreatment requirements for POTWs are contained within 40 C.F.R. part 403. Per 40 C.F.R. § 403.8, any POTW (or combination of POTWs operated by the same authority) with a total design flow greater than 5 MGD and receiving, from industrial users, pollutants which pass through or interfere with the operation of the POTW or are otherwise subject to pretreatment standards will be required to establish a POTW pretreatment program unless the NPDES state exercises its option to assume local responsibilities as provided for in section 403.10(e). The Executive Officer may require that a POTW with a design flow of 5 MGD or less develop a POTW pretreatment program if he or she finds that the nature or volume of the industrial influent, treatment process upsets, violations of POTW effluent limitations, contamination of municipal sludge, or other circumstances warrant in order to prevent interference with the POTW or pass through as defined in 40 C.F.R. § 403.3.

The Order retains pretreatment requirements as the Facility has total effluent flows in excess of 5 MGD. The Monitoring and Reporting Program includes additional reporting requirements in sections IX.C.3 through 12 of the MRP that reflect federal pretreatment requirements under 40 C.F.R. part 403.

c. Collection System

The State Water Board issued General Waste Discharge Requirements for Sanitary Sewer Systems, Water Quality Order 2006-0003-DWQ (General Order) on May 2, 2006. The State Water Board amended the Monitoring and Reporting Program for the General Order through Order WQ 2013-0058-EXEC on August 6, 2013. The General Order requires public agencies that own or operate sanitary sewer systems with sewer lines one mile of pipe or greater to enroll for coverage and comply with the General Order. The General Order requires agencies to develop sanitary sewer management plans and report all sanitary sewer overflows, among other requirements and prohibitions.

The General Order contains requirements for operation and maintenance of collection systems and for reporting and mitigating sanitary sewer overflows that are more extensive, and therefore, more stringent than the requirements under federal standard provisions. The Discharger and public agencies that are discharging wastewater into the facility's collection system were required to obtain enrollment for regulation under the General Order by December 1, 2006.

d. Resource Recovery from Anaerobically Digestible Material.

Some POTWs choose to accept organic material such as food waste, fats, oils, and grease into their anaerobic digesters for co-digestion to increase production of methane and other biogases for energy production and to prevent such materials from being discharged into the collection system, which could cause sanitary sewer overflows. The California Department of Resources Recycling and Recovery has proposed an exemption from requiring Process Facility/Transfer Station permits where this activity is regulated under waste discharge requirements or NPDES permits. The proposed exemption is restricted to anaerobically digestible material that has been prescreened, slurried, and processed/conveyed in a closed system to be co-digested with regular POTW sludge. The proposed exemption requires that a POTW develop Standard Operating Procedures for the proper handling, processing, tracking, and management of the anaerobically digestible material before it is received by the POTW.

Standard Operating Procedures are required for POTWs that accept hauled food waste, fats, oil, and grease for injection into anaerobic digesters. The development and implementation of Standard Operating Procedures for management of these materials is intended to allow the California Department of Resources Recycling and Recovery to exempt this activity from separate and redundant permitting programs. If the POTW does not accept food waste, fats, oil, or grease for resource recovery purposes, it is not required to develop and implement Standard Operating Procedures.

6. Other Special Provisions

a. Discharges of Storm Water

The Order does not address discharges of storm water from the treatment and disposal site, except to require coverage by and compliance with applicable provisions of General Permit No. CAS000001 - Waste Discharge Requirements for Discharges of Storm Water Associated with Industrial Activities.

b. Concentrate Waste Dilution Ratios

Upon completion of the AWPF, the discharge will consist of various blends of AWPF RO concentrate, hauled saline waste, and secondary effluent. Throughout the summer months, the AWPF will treat more secondary effluent and produce more RO concentrate than during winter months. In addition, the Discharger blends secondary effluent with RO concentrate and hauled saline waste to ensure that effluent limitations are met. Since the compositions of RO concentrate and hauled saline waste and secondary effluent are very different, with RO concentrate and hauled saline waste having higher TDS and generally more concentrated pollutants, the dispersion of combined effluent in the receiving water will depend on the ratio of RO concentrate and hauled saline waste to total effluent.

The Discharger has conducted modeling to characterize the expected ratios of RO concentrate and hauled saline waste to secondary effluent and has predicted the

dilution factors (Dms) that would be available under these ratios[2]. Because the dilution and waste characteristics may be extremely variable, the limitations in this permit are established for four different dilution factors. While the limitations themselves are set equal to the Ocean Plan objectives, the reported results for compliance determination are based on one of the four tiers of Dms. Table 10 in the Order presents the Discharger's model results—concentrate waste dilution ratios used to develop minimum probable initial dilution factors (Dms). The concentrate waste dilution ratios and corresponding Dms in Table 10 of this Order were calculated as the

(Total waste flow – Secondary effluent flow)/Secondary effluent flow

which is equivalent to

$$\text{Concentrate Waste Dilution Ratio} = \frac{AWPF\ RO\ Concentrate\ (MGD) + Hauled\ Saline\ Waste\ (MGD)}{Total\ Effluent\ (MGD)}$$

For reporting compliance with effluent limitations for Ocean Plan Table 1 parameters, the Discharger selects the appropriate Dm based on the calculated concentrate waste dilution ratio on the day of sampling and calculates the concentration at the ZID. The procedures for calculating and reporting compliance with effluent limitations is provided as footnotes to Table E-7 and is discussed in section VI.B. of this Fact Sheet.

7. Compliance Schedules – Not Applicable

VI. RATIONALE FOR MONITORING AND REPORTING REQUIREMENTS

CWA section 308 and 40 C.F.R. §§ 122.41(h), (j)-(l), 122.44(i), and 122.48 require that all NPDES permits specify monitoring and reporting requirements. Water Code sections 13267 and 13383 also authorize the Central Coast Water Board to establish monitoring, inspection, entry, reporting, and recordkeeping requirements. The Monitoring and Reporting Program (MRP), Attachment E of this Order establishes monitoring, reporting, and recordkeeping requirements that implement federal and state requirements. The following provides the rationale for the monitoring and reporting requirements contained in the MRP for this facility.

A. Influent Monitoring

In addition to influent flow monitoring, influent monitoring for $CBOD_5$ and TSS is required to determine compliance with the Order's 85 percent removal requirement for those pollutants.

B. Effluent Monitoring

Quarterly compliance monitoring for chromium VI and selenium has been removed from this Order because the discharge did not exhibit reasonable potential for these pollutants. The Discharger must still monitor for chromium VI and selenium as Ocean Plan Table 1 parameters specified in Table E-4 of the MRP.

This Order includes new monitoring requirements for bacteria that apply only upon EO determination. Bacteria is mainly monitored through receiving water stations. If the EO determines there are potential exceedances of the Ocean Plan objectives, then additional monitoring of effluent is required to determine the influence of the discharge on the nearby ocean waters.

[2] Technical Memorandum dated November 15, 2017, submitted by the Discharger to the Central Coast Water Board.

Effluent monitoring for dissolved oxygen, nitrate plus nitrite (as N), total Kjeldahl nitrogen (TKN), and total phosphorus is added to Table E-4 in this Order to align with required monitoring in EPA Form 2A, section B.6. Table E-4 includes monitoring for orthophosphate that was not identified in Table E-4 of Order R3-2014-0013. This is not a new requirement as it was included in Order R3-2014-0013 as part of CCLEAN effluent monitoring requirements.

Secondary effluent standards reflect the minimum level of treatment to be achieved through municipal wastewater treatment. The point of compliance determination must therefore be located prior to commingling with other waste streams. This Order includes a new monitoring location, EFF-001A, for compliance determination with $CBOD_5$, TSS, and pH. For this Facility, TOC is an indicator of treatment level, similar to $CBOD_5$. Monitoring requirements for $CBOD_5$, TSS, pH, and TOC are moved from the final combined effluent location (previously designated M-001) to the new location EFF-001A.

As described in section V.B.6 of this Fact Sheet, the Discharger is required to calculate and report the concentration at edge of the ZID. A new effluent monitoring location EFF-001B has been established for this purpose. The procedures for reporting compliance with effluent limitations at discharge point 001 are as follows:

Step 1: Report raw total effluent data as EFF-001.

Step 2: Calculate Concentrate Waste Dilution Ratio using the Equation 1 below.

Equation 1: Concentrate Waste Dilution Ratio $= \frac{AWPF\ RO\ Concentrate\ (MGD) + Hauled\ Saline\ Waste\ (MGD)}{Total\ Effluent\ (MGD)}$

Step 3: Using column 1 of Table 9 of the Order (Table F-18 below), determine the corresponding Dm

Table F-18. Concentrate Waste Dilution Ratio Ranges and Corresponding Dilution [1]

(1) Ratio of RO Concentrate + Hauled Saline Waste to Total Effluent	(2) Dm for Compliance with Ocean Plan Table 1 Parameters	(3) Monitoring Location for Reporting
0-0.127	145	EFF-001B
0.128 – 0.421	259	EFF-001B
0.422 – 0.744	388	EFF-001B
≥ 0.745	473	EFF-001B

[1] Minimum probable initial dilution expressed as parts seawater per part wastewater.

Step 4: Calculate results for Compliance Determination (Co) using Equation 2 below.

Equation 2: $Co = \frac{Ce + DmCs}{1 + Dm}$

Where:

Co = the concentration at the completion of initial dilution
Ce = effluent concentration reported for Monitoring Location EFF-001
Cs = background seawater concentration provided in Table 3 of the 2015 Ocean Plan (with all metals expressed as total recoverable concentration, µg/L
Dm = parts seawater per part wastewater, the applicable minimum probable initial dilution from Table F-18

Step 5: Using Co, calculate the 6-month median, daily maximum, and instantaneous maximum concentrations and report these values for EFF-001B.

C. Whole Effluent Toxicity Testing Requirements

This Order contains acute and chronic toxicity effluent limitations as described in sections IV.C.3 and IV.C.5 of this Fact Sheet.

This Order requires the Discharger to conduct additional toxicity testing for exceedances of the toxicity effluent limitations. If the additional tests demonstrate toxicity, the Discharger is required to submit a Toxicity Reduction Evaluation (TRE) Workplan in accordance with the submitted TRE Workplan and U.S. EPA guidance which shall include: further steps taken by the Discharger to investigate, identify, and correct the causes of toxicity; actions the Discharger will take to mitigate the effects of the discharge and prevent the recurrence of toxicity; and a schedule for these actions.

Section III.C.10 of the Ocean Plan requires a TRE if a discharge consistently exceeds an effluent limitation based on a toxicity objective in Table 1 of the Ocean Plan.

Consistent with the requirements of the Ocean Plan, section III.C.5 of the MRP (Attachment E) requires the Discharger to develop an Initial Investigation TRE Workplan and submit the Initial Investigation TRE Workplan within 90 days of the effective date of this Order. The Workplan must describe steps the Discharger intends to follow if the effluent limitation for chronic toxicity is exceeded.

If the effluent limitation for acute or chronic toxicity is exceeded in any one test, the Discharger must conduct a TRE if the toxicity is exceeded in any of the next four succeeding tests performed at 14-day intervals and notify the Central Coast Water Board and U.S. EPA, Region 9. The requirement for a minimum of four succeeding tests performed at 14-day intervals is based on the probability of encountering at least one toxicity exceedance assuming a true, but unknown level of occurrence. After the toxicity exceedance, the Discharger must continue to conduct the routine monthly monitoring for acute and chronic toxicity as required in Monitoring and Reporting Program (Attachment E). The TRE shall be conducted in accordance with the approved TRE Workplan and available U.S. EPA guidance documents. The Discharger must also implement a Toxicity Identification Evaluation (TIE), as necessary, based upon the magnitude and persistence of toxicity effluent limitation exceedances. Once the source of toxicity is identified, the Discharger must take all reasonable steps to reduce the toxicity to meet the chronic toxicity effluent limitation identified in section IV.A of this Order.

Within 30 days of completion of the TRE, the Discharger must submit the results of the TRE, including a summary of the findings, data generated, a list of corrective actions taken or planned to achieve consistent compliance with all the toxicity limitations of this Order and prevent recurrence of exceedances of those limitations, and a time schedule for implementation of any planned corrective actions. The Discharger must implement any planned corrective actions in the TRE Final Report in accordance with the specified time schedule, unless otherwise directed in writing by the Central Coast Water Board and/or U.S.EPA, Region 9. The corrective actions and time schedule must be modified at the direction of the Central Coast Water Board and/or U.S. EPA, Region 9.

Refer to section V of the MRP (Attachment E).

D. Recycled Water Monitoring

The Discharger shall comply with applicable State and local requirements regarding the production and use of recycled wastewater, including those requirements established by the State Water Board Division of Drinking Water at title 22, sections 60301 - 60355 of the California Code of Regulations, Water Recycling Criteria. The requirement in section IV.C.13

of the Order is included to clarify that the Order does not permit the discharge of recycled water.

E. Receiving Water Monitoring

1. Surface Water

Receiving water monitoring is carried over from Order No. R3-2014-0013 as necessary to determine compliance with receiving water limitations and for the protection of public health. Benthic sediment and benthic biota monitoring of the receiving water has been established in the Order to establish a baseline of the current conditions surrounding the diffuser for future permitting efforts.

2. Groundwater – Not Applicable

F. Other Monitoring Requirements

1. CCLEAN

This Order retains the requirement to participate in CCLEAN monitoring. The CCLEAN is a coordinated monitoring effort to address receiving water in the Monterey Bay and in necessary to assess whether beneficial uses are affected by discharges. The CCLEAN requirements specified in this Order are updated to reflect current program methods and pollutants of concern, and to align with requirements for other Permittees participating in the program.

2. Biosolids Monitoring

Biosolids monitoring requirements have been retained from the previous order and are based on the requirements of 40 C.F.R. part 503.

3. Pretreatment Monitoring.

This Order retains the requirements of the previous permit to conduct pretreatment monitoring and reporting.

4. Outfall Inspection.

This Order retains the requirement of the previous permit to conduct annual, visual inspections (including dye tracer tests) of the outfall structure and report to the Central Coast Water Board regarding its physical integrity.

5. MBNMS Spill Reporting.

This Order retains the requirement of the previous permit to report all sewage spills under its control that are likely to enter ocean waters, directly to the MBNMS office.

6. Discharge Monitoring Report-Quality Assurance (DMR-QA) Study Program

Under the authority of section 308 of the CWA (33 U.S.C. § 1318), U.S. EPA requires major and selected minor dischargers under the NPDES Program to participate in the annual DMR-QA Study Program. The DMR-QA Study evaluates the analytical ability of laboratories that routinely perform or support self-monitoring analyses required by NPDES permits. There are two options to satisfy the requirements of the DMR-QA Study Program: (1) The Discharger can obtain and analyze a DMR-QA sample as part of the DMR-QA Study; or (2) Per the waiver issued by U.S. EPA to the State Water Board, the Discharger can submit the results of the most recent Water Pollution Performance Evaluation Study from its own laboratories or its contract laboratories. A Water Pollution Performance Evaluation Study is similar to the DMR-QA Study. Thus, it also evaluates a laboratory's ability to analyze wastewater samples to produce quality data that ensure

the integrity of the NPDES Program. The Discharger shall ensure that the results of the DMR-QA Study or the results of the most recent Water Pollution Performance Evaluation Study are submitted annually to the State Water Board. The State Water Board's Quality Assurance Program Officer will send the DMR-QA Study results or the results of the most recent Water Pollution Performance Evaluation Study to U.S. EPA's DMR-QA Coordinator and Quality Assurance Manager.

VII. PUBLIC PARTICIPATION

The Central Coast Water Board considered the issuance of WDRs that serve as an NPDES permit for the Monterey One Water Regional WWTP and AWPF. As a step in the WDR adoption process, Central Coast Water Board staff developed tentative WDRs and encouraged public participation in the WDR adoption process.

A. Notification to Interested Persons

The Central Coast Water Board notified the Discharger and interested agencies and persons of its intent to prescribe WDRs for the discharge and provided an opportunity to submit written comments and recommendations. Notification was provided through **publication in the Monterey County Herald on June 18, 2018, and September 3, 2018.**

The public had access to the agenda and any changes in dates and locations through the Central Coast Water Board's website at:
http://www.waterboards.ca.gov/centralcoast/

B. Written Comments

Interested persons were invited to submit written comments concerning the tentative WDRs as provided through the notification process. Comments were encouraged to be sent via email to centralcoast@waterboards.ca.gov. Comments may also have been submitted in person, or by mail, to the Executive Officer at the Central Coast Water Board at:

Central Coast Water Board
895 Aerovista Place, Suite 101
San Luis Obispo, CA 93401-7906

To be fully responded to by staff and considered by the Central Coast Water Board, the written comments were due at the Central Coast Water Board office by 5:00 p.m. on **July 20, 2018**.

Non-substantive comments and edits were received from the MBNMS and the Discharger that improved the clarity and readability of the Order. Staff received substantive written comments from Steve Shimek of The Otter Project on July 20, 2018. The comment letter is included as Attachment 2 of the staff report. The comments are summarized, along with staff's response to the comments, as follows:

1. The Otter Project suggests that the Monterey One Water discharge could be related to harmful algal blooms (HABs) and requests Monterey One Water analyze effluent samples for total nitrogen, Kjeldahl nitrogen, and ammonia and report monthly.

Staff Response: Nutrient loading from Monterey One Water's WWTP is much lower than from runoff and far smaller than the nutrient loading from naturally occurring processes such as upwelling. Central Coast Water Board staff has reviewed HAB work and assessments made by independent scientists in the Monterey Bay region. Central Coast Water Board staff concurs with the assessment that nutrient loads from the Monterey One Water discharge are unrelated to the

frequency or intensity of the algal blooms occurring along this stretch of coastline. Several lines of evidence support this conclusion including:

• HABs initiated within Monterey Bay occur mostly in the fall (Ryan et al. 2008, Schulien et al. 2017), which is the dry season when the Monterey One Water discharge is negligible or zero.

• HABs initiated within Monterey Bay start in the northeast corner, spatially separated from the Monterey One Water ocean outfall offshore off Marina (Pennington and Chavez 2000, Ryan et al. 2008, Ryan et al. 2009).

• HABs are also advected into Monterey Bay from the North American west coast shelf. These blooms are started by large-scale climate events resulting in 1) stratification of offshore waters, 2) bloom development following upwelling episodes, and 3) advection into coastal bays such as Monterey Bay following wind events (Trainer et al. 2000, Ryan et al. 2008, Ryan et al. 2009, Du et al. 2015, McCabe et al. 2016, Du et al. 2016).

• Both HABs initiated within and outside Monterey Bay are preceded by and fueled by large nutrient infusions such as from upwelling, Monterey Bay Canyon nutrient pumping, and the Elkhorn Slough plume (Trainer et al. 2000, Fischer et al. 2014, Ryan et al. 2014, McCabe et al. 2016).

• A small-sized bloom (5 km^2) in Monterey Bay needs a daily input of 8.75×10^4 kg N, whereas a large-size bloom (80 km^2) needs on the order of 1.4×10^6 kg N, to sustain the bloom (Ryan et al. 2008). The N load from Monterey One Water discharge during the dry season is up to 125 kg per day, representing 0.14% of the daily N needed to sustain a small-sized bloom, and 0.009 % of the daily N necessary to sustain a large-sized fall bloom, in Monterey Bay.

• HAB bloom development in Monterey Bay is not associated with riverine or wastewater effluent discharge as these sources are not at a scale large enough to fuel blooms (Schulien et al. 2017). However, once developed, riverine sources of nutrients may partially sustain nearshore filaments of blooms (Lane et al. 2009).

Although there is no clear connection between wastewater effluent discharge and these blooms, staff agrees that monitoring could provide scientifically valid or usable information relevant to the prediction or management of algal blooms. Staff has proposed requirements in the draft order to increase the monitoring and reporting frequency to a monthly basis for total nitrogen, Kjeldahl nitrogen, and ammonia.

2. The Otter Project requested development of a total nitrogen limitation for the Order.

Staff Response: The State Water Board develops ocean discharge limits through periodic reviews of the California Ocean Plan. As such, the State Water Board Ocean Plan triennial review process is the appropriate venue to request development of total nitrogen limits, as opposed to a Central Coast Water Board permit adoption process. Although monitoring is proposed in the draft order, staff recommends not applying effluent limits for total nitrogen and Kjeldahl nitrogen until the State Water Board updates the Ocean Plan to include discharge limits for those pollutants. Without discharge limits, these pollutants will not be used for compliance assessments under the permit.

3. The Otter Project requested the development of a time schedule order that requires elimination of the ocean discharge or denitrification of the facility's effluent.

Staff Response: Staff does not recommend that a time schedule order be required in this Order. The Pure Water Monterey project will help remove nitrate and other pollutants that would normally flow untreated into surface waters and then enter the MBNMS (see Attachment 3 of the staff report). The Pure Water Monterey project is an environmentally beneficial project that will treat waste waters and increase water recycling in the region. During the dry season, almost all wastewater is recycled, and there is little discharge through the ocean outfall. Although year-round zero discharge is an outstanding goal, currently this is not possible. Without Pure Water Monterey, almost all the nitrogen loading from the Reclamation Ditch, Tembladero Slough, Blanco Drain, and the Salinas Pump Station and Treatment Facility diversions would continue to flow downstream and affect water quality. The majority of nitrogen in these surface waters is currently released to Elkhorn Slough via the Old Salinas River Channel, or, during times when the Salinas River sand bar is breached, part of this loading flows directly to Monterey Bay via the Blanco Drain. With Pure Water Monterey, the total nitrogen pollutant loading to the Monterey Bay nearshore region via the Elkhorn Slough plume may be substantially reduced compared to existing conditions. The Elkhorn Slough plume has been hypothesized to fuel HABs in the northeast corner of Monterey Bay during the dry season (Fischer et al. 2014) and this project will have a quantifiable beneficial impact related to the total pollutant load to Monterey Bay.

References

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Fischer AM, Ryan JP, Levesque C, Welschmeyer N (2014) Characterizing estuarine plume discharge into the coastal ocean using fatty acid biomarkers and pigment analysis. Mar Environ Res 99:106–116

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Schulien J, Peacock MB, Hayashi K, Raimondi P, Kudela RM (2017) Phytoplankton and microbial abundance and bloom dynamics in the upwelling shadow of Monterey Bay, California, from 2006 to 2013. Mar. Ecol. Prog. Ser. 572: 43-56.

Trainer VL, Adams NG, Bill BD et al. (2000) Domoic acid production near California coastal upwelling zones, June 1998. Limnol. Oceanogr. 45: 1818-1833.

C. Public Hearing

The Central Coast Water Board held a public hearing on the tentative WDRs during its regular meeting on the following date and time and at the following location:

Date:	December 6-7, 2018
Time:	9:00 a.m.
Location:	Central Coast Water Board Offices 895 Aerovista Place, Suite 101 San Luis Obispo, CA 93401

Interested persons were invited to attend. At the public hearing, the Central Coast Water Board heard testimony pertinent to the discharge, WDRs, and permit. For accuracy of the record, important testimony was requested in writing.

D. Reconsideration of Waste Discharge Requirements

Any person aggrieved by this action of the Central Coast Water Board may petition the State Water Board to review the action in accordance with Water Code section 13320 and California Code of Regulations, title 23, sections 2050 and following. The State Water Board must receive the petition by 5:00 p.m., within 30 calendar days of the date of adoption of this Order at the following address, except that if the thirtieth day following the date of this Order falls on a Saturday, Sunday, or state holiday, the petition must be received by the State Water Board by 5:00 p.m. on the next business day:

State Water Resources Control Board
Office of Chief Counsel
P.O. Box 100, 1001 I Street
Sacramento, CA 95812-0100

Or by email at waterqualitypetitions@waterboards.ca.gov

For instructions on how to file a petition for review, see:
<http://www.waterboards.ca.gov/public_notices/petitions/water_quality/wqpetition_instr.shtml>

E. Information and Copying

The Report of Waste Discharge, other supporting documents, and comments received are on file and may be inspected at the address above at any time between 8:00 a.m. and 5:00 p.m., Monday through Friday. Copying of documents may be arranged through the Central Coast Water Board by calling (805) 549-3147.

F. Register of Interested Persons

Any person interested in being placed on the mailing list for information regarding the WDRs and NPDES permit should contact the Central Coast Water Board, reference this facility, and

provide a name, address, and phone number.

G. Additional Information

Requests for additional information or questions regarding this order should be directed to Peter von Langen at (805) 549-3688 or peter.vonlangen@waterboards.ca.gov or Phil Hammer at (805) 549-3882 or phillip.hammer@waterboards.ca.gov.